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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/916,256	07/30/2001	Wayne Lee Borgen	8200.495	8665
7590 10/21/2005			EXAMINER	
Matthew W. Stavish, Esq. Liniak, Berenate, Longacre and White 6550 Rock Spring Dr. # 240 Bethesda, MD 20817			YEAGLEY, DANIEL S	
			ART UNIT	PAPER NUMBER
			3611	

DATE MAILED: 10/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/916,256	Applicant(s) BORGEN ET AL.	
	Examiner Daniel Yeagley	Art Unit 3611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 9 and 19-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 13 – 18 are objected to because of the following informalities:

Regarding claim 18, line 4, the phrase “first and second [*axles*]” should be change to read --first and second axle shafts -- to more clearly define which axles (axle shafts or the drive axles) applicant is referencing.

Regarding claim 13, line 1, the term “double disconnect [*differential*] assembly” should be changed to --double disconnect assembly--.

Regarding claims 14 through 18, each line 1, the terms “[*dual*] disconnect [*differential*] assembly” should be changed to --double disconnect assembly--.

Appropriate correction is required.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969). Claims 1 - 8, 10 - 18 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Borgan et al claims 1 - 15 of U.S. Patent No. 6,517,462 in view of Hasegawa ‘031, wherein the Borgan patent discloses a double disconnect assembly as claimed comprising a

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clutch assembly that engages a first and second axle shaft that are axially slidable with respect to the differential and wherein the reference to Hasegawa discloses a double disconnect assembly comprising first and second drive axles; wherein the second drive axle is driven by a drive train wherein a first and second clutch assembly are disengaged and engaged from the drive train as broadly claimed.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 – 8, 11 – 13 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hasegawa '031 in view of Onodera '584.

Hasegawa shows a double disconnect assembly having numerous embodiments comprising a primary rear drive axle, a second auxiliary drive axle of a tandem vehicle and an auxiliary rear prop shaft (at least one drive train 17); (figure 1 – 15), wherein the double disconnect assembly comprises a first clutch assembly 47 or 20 for engaging and disengaging a drive train and a sliding second clutch assembly 57 that selectively engages and disengages a first and second axle shaft 8 or 25 of a second drive axle from a differential assembly 32 or 89, such that when the first and second clutch assemblies are in a non-engaged condition the differential assembly would be in a non-rotating state, the differential assembly comprises pinion gears 93 or 55 mounted with respect to a cross pin 92 or 54, side gears 94 or 56 that have axially

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extending central bores with splines (boss portion) formed on portions of the bores to engage splines on the axle shafts and are rotatable about a transverse axis coaxial with the axle shafts, wherein outer surfaces of the axle shafts and inner surfaces of the side gears have complimentary splines (figure 5), wherein the axle shafts are in driving engagement with the side gears when the axle shafts are in a clutch engaged position and free wheeling when in a clutch disengaged position via clutch means 57 and a clutch collar mounted on one of the axle shafts and includes an interconnecting member that interconnects the first and second axles to translate simultaneously along a transverse axis, and an actuator arm (lever, figure 3), and further shows a rod 52 that extends from an end of the first axle shaft to an end of the second axle shaft and passes through the cross pin, but failed to show the first and second axle shafts being axially slidable with respect to the differential assembly to mutually disconnect the axle shafts from the first and second side gears.

Onodera discloses a double disconnect assembly for a drive assembly that shows a driven drive axle comprising the prior art feature of a first and second axle shaft being coupled by a clutch assembly to provide simultaneous axial movement of the axle shafts that incorporates a biased axially slidable first axle shaft 29a and 36 and includes a second slidable axle shaft; element 31 to thereby mutually disconnect the first and second axle shafts from a first and second side gear 27, wherein the axles are axially slidable with respect to a differential assembly, and further discloses a compression spring 35 which urges the first and second axle shafts toward one of a clutch engaging position and disengaging position.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the double disconnect assembly of Hasegawa clutch and axle shaft

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arrangement with respect to the differential with an alternative clutch and shaft arrangement that utilizing a biased axial sliding splined axle shafts which engage into the side gears of the differential, such like that suggested by Onodera to alternatively provide a split axle drive mechanism arranged in a simple construction to prevent back drive to components in the differential as taught by Onodera.

5. Claims 10 and 14 – 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hasegawa '031 as modified by Onodera '584 in further view of Hunt.

Hasegawa as modified by Onodera disclosed a double disconnect assembly having a first and second clutch assembly *for* engaging and disengaging a drive train, wherein the sliding second clutch assembly as modified by Onodera selectively engages and disengages a first and second axle shaft from a differential assembly which utilizes first and second clutch members (splines), wherein the second clutch members are on the first and second axle *for* engaging with first clutch members but failed to show the first clutch members on the side gears.

Hunt discloses a double disconnect drive assembly that shows a splined slidable clutch arrangement, wherein the clutch members of the axle shafts are splined to the clutch members on side gears of a differential assembly by a sliding arrangement of clutch members, wherein the clutch members of the axle shafts are engaged with clutch members (splines) on first and second side gears as claimed.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have further modified the double disconnect assembly of Hasegawa clutch and axle shaft arrangement as modified by Onodera with an alternative clutch arrangement that utilizes

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clutch members disposed between the side gears and the axle shafts as suggested by Hunt in order to provide a more simpler more compact and more reliable disconnecting means to disconnect the differential assembly from the axles as disclosed by Hunt.

Response to Arguments

6. It was implied in the Amendment filed 7/21/05 that request for reconsideration as stated “in view of the above amendment and the following remarks”, however, the rejection was reconsidered solely on applicants’ remarks because no amendment to the claims was submitted. It is again noted that applicant continues to hold in abeyance the double patenting rejection until a later time and has not addressed the rejection. Applicant should however note the change made in the secondary reference that was applied. Further regarding applicant's arguments filed 7/21/05 have been fully considered but are not fully persuasive. However upon further review of the prior art cited, claims 10 and 14 through 16 are now rejected with the additional combination of Hunt which clearly shows the prior art of constructing a coupling arrangement utilizing clutch members of a disconnect assembly on the axle shafts to engaged with clutch members on first and second side gears as claimed and is considered as being obvious to one of ordinary skill in the art to have combined the known features which would flow naturally from following the suggestion of the prior art and cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). Regarding applicants argument that Hasegawa, Onodera and Hunt fail to teach or render obvious have been fully considered but they are not persuasive. Hasegawa as modified by Onodera and Hunt as stated above is considered to read on the claims as broadly stated. Further it is noted that

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numerous arguments within applicants' remarks are drawn to limitations which are not recited in the rejected claim(s); for example; "two axles being disconnected from their associated differential" or "a ring gear and differential gear(s) that remain stationary when the axle is engaged" are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

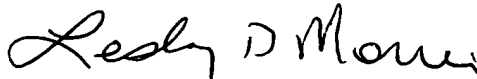
Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Yeagley whose telephone number is (571)-272-6655. The examiner can normally be reached on Mon. - Fri; first Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lesley D. Morris can be reached on (571) - 272 - 6651. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

D.Y.


LESLEY D. MORRIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600